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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,862	04/06/2001	Shinji Kuga	0505-0813P	3205

2292 7590 10/30/2002

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EXAMINER
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MCANULTY, TIMOTHY P

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 10/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/826,862	KUGA ET AL.	
	Examiner Timothy P McAnulty	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 13 September 2002.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-19 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)                            4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .                    6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara in view of Izumi.

Ishihara discloses in figure 4 a V-belt transmission comprising a crankshaft 56; a driving pulley having a fixed pulley half 58 fixed to said crankshaft; a axially movable pulley half 68; a plurality of cooling fins 64 located on said fixed pulley half; an outside air inlet port (un-referenced) arranged opposite said fins; a short sleeve (un-referenced); a ramp plate 76; and a long sleeve 74; wherein said driving pulley coupled to a driven pulley so as to transmit a driving force to said driven pulley wherein the driven pulley is connected to an axel 148 of a wheel drive section of the transmission via a driven shaft 94, a counter shaft 150, and a plurality of transmission gears 140. Ishihara does not disclose said fixed pulley half being fixed to said crankshaft by a bolt. However, Izumi teaches in figure 4, a fixed pulley half of a variable radius pulley fixed to a shaft with a bolt. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishihara in view of the teachings of Izumi to fix the fixed pulley half to the crankshaft by a bolt engaged in a bolt hole within the crankshaft to provide a greater thread engagement without increasing the overall length of the crankshaft.

Regarding claims 6 and 18, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a chamfer on the outer edge of the bolt hole as it is old and well known in the art to provide a chamfer on a bolt hole to provide proper thread alignment.

***Response to Arguments***

3. Applicant's arguments filed on 13 September 2002 in Paper No. 9 have been fully considered but they are not persuasive. Izumi clearly teaches the use of a threaded bolt to fix a pulley half to a shaft. Although Izumi discloses the threaded bolt fixing a pulley half to a transmission main shaft, based the teachings of Izumi, it would have been obvious to one of ordinary skill in the art to use a threaded bolt to fix pulley half to a crankshaft. The teaching of Izumi is not merely the use of a threaded bolt to fix a pulley half to a transmission main shaft but more generally the use of a threaded bolt to fix a pulley half to any shaft. As such, the teachings of Izumi are applicable to modify the apparatus of Ishihara to attach a fixed pulley half to a shaft of a vehicle transmission even is such shaft is the crankshaft. Furthermore, the differences between the present claimed invention and the prior art are such that the subject matter of the claimed invention as a whole would have been obvious to one of ordinary skill in the art at the time of the invention. It is not necessary that either Ishihara or Izumi actually suggest, expressly or in so many words, the changes or possible improvements of the present claimed invention. *In re Scheckler*, 168 USPQ 716 (CCPA 1971). Additionally, the examiner recognizes that the references cannot be arbitrarily combined and that there must be some reason why one skill in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that the motivation to make the modification be expressly articulated. The test for combining

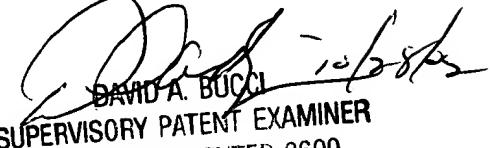
references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re Simon*, 174 USPQ 114 (CCPA 1972); *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545(CCPA 1969). As such, disregarding considerations for available space and cost of manufacturing a threaded bolt cooperating with female threads and a nut cooperating with male threads are art recognized equivalents and one of ordinary skill in the art would use them interchangeably.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McAnulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone numbers for the organization where this application or proceeding is assigned are 703.305.7687 for regular communications and 703.305.7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1113.



DAVID A. BUCCI  
SUPERVISORY PATENT EXAMINER  
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tpm   
October 23, 2002